

June 2, 2014

Frank Biba, AICP, LEED AP
Chief, Environmental Programs
City of Annapolis
Department of Neighborhood & Environmental Programs
145 Gorman Street, 3rd Floor
Annapolis, Maryland 21401

Re: Aris T. Allen Boulevard Residential/Rocky Gorge PUD
GRD14-0006, Response to comments regarding
SWM, ESC, FCP, PWD, Planning and FSD

Dear Mr. Biba:

McLaren Engineering Group respectfully submits the following responses to your review comments received via email, dated 5-23-14 thru 5-28-14, for the above referenced Grading Permit Plan resubmission (2nd submission), including the updated Forest Stand Delineation.

STORMWATER MANAGEMENT – COMPUTATIONS:

1. The drywell calculations for Lots 7, 8, 13, 14, 19, 20, 25 and 26 have been revised.
2. The micro-bioretenention calculations for areas 1, 2, 8, 11, 13, and 15 have been revised.
3. The micro-bioretenention storage volumes for areas 2, 8, 11, 13, and 15 have been clarified via added calculations to demonstrate the 75% requirement.
4. Micro-bioretenention area 1 has been corrected, drafting error.
5. Micro-bioretenention area 12 has been corrected, drafting error.
6. Micro-bioretenention area 13 has been corrected, drafting error.
7. Micro-bioretenention area 14 has been corrected, drafting error.
- 7a. Regarding the infiltration trench comments, they have been designed and set vertically based upon the attached geotechnical findings. Specifically, we have set the bottoms of the trenches to match the existing sand layer elevations.
8. Narratives have been added to the computations package to support Part 1 being able to “stand alone”.

STORMWATER MANAGEMENT – PLANS:

1. The SWM design near drainage areas 2 & 15 and 14 & 16 has been revised to eliminate any drainage bypass.
2. The roof drain to drywell piping has been shown for lots 26-31, 47 & 48.
3. Drywells located in driveways will have observation caps fabricated to meet traffic loading. A detail has been added to the plan set – sheet C10.00.

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4. Bio-retention area 4 is anticipated to be lined with a polyliner in accordance with MDE specifications. This will be detailed with the final engineering plans for Part 2, at a later date.
5. Access to the rip-rap outfall has been amended to be included.
6. On sheet 9.10, drainage area 1 has been corrected to a 0.31 ac impervious area.
7. On sheet C11.00, the drainage area information for areas 1, 2, 12, 13, 14 and 15 now match.
8. On sheet C10.00, the drafting error has been corrected, there is now a MB13 and MB14.
9. The areas draining to MB10 and MB4, as well as MB8 and MB9 are delineated on the drainage area map. The break-points will be achieved through pavement warping through the curve.
10. Bio-retention areas were evaluated for lots 9, 10 and 11; however, it was determined that facilities would function better within the HOA parcel.
11. Access to MB13 and MB14 has been amended to be included.
12. The rip-rap outfall has been revised to be a "step-pool" in its final condition. Initially, the area will receive rip-rap to prevent any further erosion. Plan and profile details have been added to sheet C10.10.
13. Previous comment 10. Drywell dimensions are within the detail on sheet C10.00. The drywell details have also been modified to eliminate the overflow pipe, as requested.
14. Previous comment 3. On sheet C7.00, the trench drain reference as a permanent feature is correct. Trench drain details have been added to sheet C16.3.
15. We have responded to AASCD comments. We have included a copy of their comments herewith.

SEDIMENT & EROSION CONTROL:

1. The travel lane and staging areas have been revised to include stone, as a means to mechanically stabilize these areas during construction. Wash racks have been added at each stabilized construction entrance (SCE). The sequence of construction has been revised to indicate that the SCE, at Yawl Road, will need to be closed upon completion of the townhouses and single family units for Part 1.
2. The insets for on-lot sediment controls have been revised to include openings in the perimeter controls (SSF), to allow for a stabilized access/construction entrance on sheet C8.70 for the townhouse construction.
3. The sequence of construction items #2 & 3 in phase 2, has been revised to state that sediment and erosion control measures will need to be installed around the groups of houses, see sheet C8.80.
4. An additional Phase has been added via discussions with AA County SCD. The land area of proposed Part 2, to be disturbed, is within the limits of the guidelines. However, we will consider additional construction phases for that section with the completion of final engineering plans for Part 2, at a later date.
5. The phase I/II trap shape has been adjusted to be out of the highly erodible soils.
6. Given the following comment *A field visit revealed that the intermittent stream extends further upstream than surveyed. Our field delineation has determined that it changes from an intermittent to ephemeral stream near specimen tree T-66. Indicators include a defined channel, hydraulically sorted sediment, movement of vegetative litter, and ground-water fueled base-flow, meeting the Maryland Department of the*

Environment's definition of an intermittent stream. Adjust the associated stream buffer to reflect this, to incorporate at least a 75 foot buffer upstream of T-66. It was determined that approximately 90 feet upstream of T-66 the soil and slopes become dominated with trash and debris and should be cleaned rather than protected. This buffer may impact the location of the proposed stone outfall structures.

The environmental scientist has responded to this concern and has stated the above is not correct and he has validated this with MDE criteria. Please see his response memo included herewith.

To mitigate concerns, we have revised the rip-rap outfall to transition to a "step-pool" in its final configuration to ensure restoration and future maintenance needs.

7. To mitigate concerns, we have revised the rip-rap outfall to transition to a "step-pool" in its final configuration to ensure restoration and future maintenance needs. Additionally, access has been provided for any future maintenance needs.
8. Given the following comment..... *Show the ephemeral stream on the Natural Resource Inventory (NRI) map. Currently no ephemeral stream is shown, but one does indeed travel up-slope to the base of the steep slopes, if not a bit further. This is indicated by vegetative litter being moved around and the presence of stained leaves. Mapping this will help you determine where and how to place your stormwater facilities in a manner that will utilize existing drainage patterns and maintain existing hydrology.*

The environmental scientist has responded to this concern and has stated the above is not correct and he has validated this with MDE criteria. Please see his response memo included herewith.

To mitigate concerns, we have revised the rip-rap outfall to transition to a "step-pool" in its final configuration to ensure restoration and future maintenance needs. Additionally, access has been provided for any future maintenance needs.

9. The environmental scientist has responded to this concern and has stated the above is not correct and he has validated this with MDE criteria. Please see his response memo included herewith.
10. We have modified the sequence of construction, to include:
 - a. *After approval, any proposed changes to the sequence must be approved by the City and the Soil Conservation District.*

The above referenced note has been added to note #4, Phase I of the sequence of construction.

- b. *Clarify when the stormwater pipes and other infrastructure will be installed.*

The sequence of construction clearly outlines when utilities will be installed (Phase II, note #5), and when the remaining infrastructure will be installed (Phase III, note #1).

- c. *Clarify when the lots (or groups of lots) will be constructed. Clarify when excavation will occur for those lots.*

The above referenced note has been added to note #1, Phase II of the sequence of construction.

- d. *The developer will be responsible for submitting as-builts to verify the sediment trap and other sediment control structures have been installed correctly.*

The above referenced note has been added to note #3, Phase I of the sequence of construction.

- e. *Approval from the sediment control inspector is required after the sediment controls are initially installed, and in between each of the phases.*

The above referenced note has been added to note #4, Phase I of the sequence of construction.

- f. *State clearly what work and what lots are included in the scope of this sediment control plan and grading permit.*

The sequence of construction clearly describes what work and what lots are included in the scope of this sediment control plan and grading permit.

TREES / FOREST CONSERVATION:

Letter dated May 23, 2014 from Frank Biba, Chief - Environmental Programs, Department of Neighborhood and Environmental Programs.....not the grading permit letter dated May 23, 2014.

Comment #1: *The demonstration, as referenced in item 4 on page 3-6 of the Manual, shown on sheet 63 is insufficient. Please provide more detailed information. Please answer all the questions.*

Maryland State Forest Conservation Manual
Section 3.1.1 Forest Conservation Plan Requirements

1. *Identify forest stands in priority areas (referenced in Natural Resources Article 5-1607 such as...)*
 - ...100-year floodplains*
 - ...intermittent or perennials streams and their buffers*
 - ...on steep slopes*

...in critical habitats
...contiguous forest connecting with other large vegetated areas on site or adjacent
...plant species on state or federal lists of rare, threatened or endangered species
...on historic site
...5 % of Champion size or larger
...in non-tidal wetlands

Steep slopes, Chesapeake Bay Critical Area, wetlands, floodplain and buffers are identified on the plan. It should be noted that all of these areas fall outside the LOD. There are no other priority areas or priority trees on the site. The proposed development activities avoid these priority areas.

2. *Locate the critical root zone of any individual trees or clusters of trees, shrubs or plants not located in a mapped forest stand but identified as having priority for retention in Natural Resources Article 5-1607(c).*

Specimen trees and their critical root zones have been identified.

3. *Locate forest stands which contain priority areas identified in a local land use plan or local forest conservation program.*

The existing recorded forest conservation easement is shown.

4. ***If the areas located in (1) through (3) above are within the proposed limits of disturbance, the applicant must demonstrate that:***

All of the areas on site under the criteria listed in 1 through 3 above are all outside the LOD and are being preserved. As such, no further demonstrations are required.

Nine (9) of the specimen trees (30" DBH and larger) are within the LOD. Items a-c below address these specimen tree concerns.

- a. *All techniques for retention of these area have been exhausted*

Opportunities for retention techniques are largely limited by the location of the specimen trees, the configuration of the site, and the layout of the platted subdivision. Appropriate methods will be used to preserve trees at the perimeter of the development, including root pruning and protection fencing.

- b. *Why these areas cannot be left undisturbed*

These nine (9) trees are located within roadways and on lots of this previously platted and recorded subdivision. There is no opportunity to leave them undisturbed within the limits of the proposed development.

- c. *How reforestation will be accomplished, and, where on the site in priority areas, afforestation or reforestation will be located, if required (see Section 3.1.3 for explanation of afforestation and reforestation threshold requirements).*

No additional afforestation or reforestation is required, as shown by the Forest Conservation Worksheet. The proposed development exceeds the desired conservation threshold.

Comment 2: Mitigation and replacement planting calculations set forth in the March 2006 memo (385 trees total) accounted for these specimen trees. We have held to the initial plant list, which did not include tulip poplars. However, we feel that other native species such as maple, river birch and sweetgum fulfill this native tree replacement requirement.

Comment 3: Sheets L1 and L2 through L2.3:

- B1. Added plant material has been provided between ATA Blvd. and the site. We have added a specific note for this area, please see plan.
- B2. The dry utilities have been shown for Part 1 only, at this time.
- B3. The trees referenced have been adjusted.
- B4. The verbatim LOD note has been added to sheet FCP-1.
- B5. The root barriers are shown on sheet L1.1 and L1.2. The note and symbol has been made more bold.

Letter dated May 23, 2014 from Frank Biba, Chief - Environmental Programs, Department of Neighborhood and Environmental Programs.....comments from grading permit letter dated May 23, 2014.

- 1. A Forest Conservation Plan has been provided. A detailed LOD note has been added to sheets C1.00, 8.00 and FCP-1. It is anticipated that the details within the FCP and the Landscape Plans address the clearing and mitigation efforts along the LOD and near the forest retention areas. A detailed strategy for competing vegetation and invasive species for a four year period from completion of the project will be included with Part 2 plans.
- 2. A pre-construction note has been added to sheet C1.00 and C8.00.
- 3. Is the same as Comment 3 above.....items B1 thru B5.

PUBLIC WORKS:

- 1. A surveying benchmark has been added to sheet C1.00.
- 2. Drawing C5.10: We have added stop bars, proposed stop signs and have noted height, material and size for stop signs. We have added material for proposed pavement markings. No-parking signs are not required. There are no signs proposed for the western end of Yawl Road.
- 3. Drawing C11.10: The plans have been revised to clearly designate public vs. private pipes to facilitate Right to Discharge Agreements.
- 4. Drawing C14.00: Proposed street grade has been revised to tie off in profile.

5. Drawing C6.00: The liber and folio of the utility easement in the southeast corner of the site has been added.
6. The storm drain connection types have been more clearly specified.
7. Drawing C13.00: An AA County specification for "Controlled Granular Fill" has been added to the plan.
8. Drawing C14.00, Note 4: Replace "public street" with "Sydney Circle" , revised.
9. The stationing for Yawl Road (C6.00-C7.00), has been turned off.
10. Drawing C12.00: The location of the proposed water crossing nearest to manhole N, has been revised to match in the plan and profile, along with all other crossings.
11. The proposed water main has been revised to an 8" diameter pipe.
12. The water main connection at Yawl Road has been revised to a mechanical joint tee and valve.
13. Will the private alleys be named? No.

PLANNING:

1. Board of Appeals conditions approval from the Opinion dated 12-20-06; have been met and are noted as follows:

- BoA 1. These plans are in substantial accordance with the 2005 & 2006 plans.
- BoA 6. The Landscape Agreement is to be a Condition of the Grading Permit.
- BoA 9. A Soils Improvement Plan, per the guidelines noted, is included (L2.40).
- BoA 11. The SWM facilities have been revised to meet the new standards, which have significantly changed, but still meet the intent of the approved planning concept.
- BoA 12. The SWM facilities have been revised to meet the new standards, which have significantly changed, but still meet the intent of the approved planning concept. This area has been redesigned as an underground infiltration trench with turf above, facilitating a green play area per the Planning Commission's conditions of approval. The storm drainage and curbing has been minimized.
- BoA 13. The SWM facilities have been revised to meet the new standards, which have significantly changed, but still meet the intent of the approved planning concept.
- BoA 14. The units were depressed, as part of the original grading plans by others, with the maximum number of steps being reduced, lower driveway slopes and lower building heights.
- BoA 16. The Indemnification Agreement is to be a Condition of the Grading Permit.
- BoA 18. The alleyway entrances utilize City Standard R4.0, without a lawn strip.
- BoA 19. There is no special signage or monumental signage proposed.
- BoA 26. A letter of credit or surety bond is being posted with DNEP for this permit.
- BoA 33. The SWM facilities have been revised to meet the new standards, which have significantly changed, but still meet the intent of the approved planning concept.

2. The liber folio for the off-site sanitary sewer easement has been added.

3. MB-5, MB-6 and MB-7 has been redesigned as an underground infiltration trench with turf above, facilitating a green play area per the Planning Commission's conditions of approval.
4. The 18" RCP within the perimeter, landscape buffer adjacent to Oxford Landing has been relocated.
5. Regarding supplemental plantings within the landscape buffer adjacent to Aris T. Allen Blvd., added plant material has been provided between ATA Blvd. and the site. We have added a specific note for this area, please see plan.
6. A detailed survey of existing vegetation within the Aris T. Allen Blvd. landscape buffer was determined not to be needed, as a field visit after clearing should suffice.
7. MB Area 1&2 Plan Enlargement plant labels, sheet L1.1, have been added.
8. All of the proposed utilities on the plans (gas, water, sewer, electric, communication, etc), have been shown on the Landscape Plans.
9. The Maple tree species in the central green area has been changed to an Oak species.
10. A plant list for Part 2, on sheet L2.0, has been added.
11. Quantities for all plant material are included on the plant list.

Thank you for your assistance, and if you have any questions or comments, please contact Pete Mellits at McLaren Engineering Group at 410-243-8787 or via e-mail at PMellits@MGMcLaren.com.

Very truly yours,

The Office of
McLaren Technical Services, Inc.
d/b/a McLaren Engineering Group



Piero "Pete" V. Mellits, P.E., LEED AP
Civil Engineering Manager



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